UNITED STATES PATENT AND TRADEMARK OFFICE

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09/744,225	01/22/2001	Michael Berger	P00,1950	3962

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EXAMINER
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ART UNIT	PAPER NUMBER
2177	

DATE MAILED: 01/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 October 2003</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-4,6,8-15,17 and 19-24</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-4,6,8-15,17 and 19-24</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: .

DETAILED ACTION

Response to Amendment

1.   The amendment filed October 8, 2003 has been entered. Claims 1, 6, 12-15, 17,

19-23 have been amended. Claim 24 has been added. Claims 5, 7, 16 and 18 have

been canceled.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

3.   **Claims 1-4, 6, 8-15, 17, 19-24 are rejected under 35 U.S.C. 102(e) as being**

anticipated by Bauer et al. (US 5,926,816 A), hereinafter "Bauer".

    As per claim 1, Bauer teaches a method for a computer-aided elimination of at

least one inconsistency in a database collection containing a database and at least one

copy database of the database (Col. 1 lines 20-30), comprising:

- "changing said database or said at least one copy database, thereby producing

  an inconsistency" at Col. 6 line 60 to Col. 7 line 3;

- "allocating at least some operations which create an inconsistency to defined

  conflict types" at Col. 21, Table II;

- "allocating each conflict type a decision set which is used to indicate possible decisions which can be used to eliminate an inconsistency created by at least one operation of said respective conflict type" at Col. 21, Table II;

- "eliminating said inconsistency utilizing said decision set" at Col. 22 lines 30-67;

- "ascertaining a plurality of inconsistencies and their dependencies on one another before eliminating said inconsistency" at Col. 21 lines 30-60;

- "modifying, while eliminating the inconsistency, said decision set for at least one conflict type based on dependencies of said inconsistencies" at Col 22 lines 45-50.

As per claim 2, Bauer teaches the method as claimed in claim 1, further comprising "the step of eliminating additional inconsistencies" at Col. 22 lines 30-67.

As per claim 3, Bauer teaches the method as claimed in claim 1, further comprising the step of "allocating each conflict type a decision set which is used to indicate possible decisions which can be used to eliminate an inconsistency created by additional operations of the respective conflict type" at Col. 21, Table II.

As per claim 4, Bauer teaches the method as claimed in claim 1, wherein "said database collection contains a plurality of copy databases of said database" at Col. 6 lines 5-25.

As per claim 6, Bauer teaches the method as claimed in claim 5, further comprising the step of "ascertaining a conflict, an anomaly, or a pseudo-anomaly when an inconsistency is ascertained" at Col. 17 line 60 to Col. 18 line 55.

As per claim 8, Bauer teaches the method as claimed in claim 2, further comprising the step of "examining, after a prescribable number of eliminated inconsistencies, said database collection for further inconsistencies and their dependencies, anomalies and pseudo-anomalies" at Col. 21 lines 59-67.

As per claim 9, Bauer teaches the method as claimed in claim 1, wherein "said database collection contains an object-oriented database" at Col. 27 lines 50-65.

As per claim 10, Bauer teaches the method as claimed in claim 1, further comprising the step of "applying said method in a context of object-oriented software development" at Col. 27 lines 50-65.

As per claim 11, Bauer teaches the method as claimed in claim 1, further comprising the step of "applying said method in a context of creating a structured electronic document" at Col. 27 lines 50-65.

As per claim 12, Bauer teaches a system for eliminating at least one inconsistency in a database collection comprising:

- "a processor configured to allocate at least some operations which create an inconsistency to defined conflict types" at Col. 6 lines 60-67;

- "allocate to each conflict type a decision set which is used to indicate possible decisions which can be used to eliminate an inconsistency created by at least one operation of said respective conflict type" at Col. 21 lines 35-65; and

- "eliminate said inconsistency using said decision set" at Col. 22 lines 30-67.

- "wherein said processor determines a plurality of inconsistencies and their dependencies on one another before the inconsistency is eliminated" at Col. 21 lines 30-60;

- "wherein said processor modifies, during eliminating of said inconsistency, a decision set for at least one conflict type based on dependencies of said inconsistencies" at Col 22 lines 45-50.

As per claim 13, Bauer teaches the system as claimed in claim 12, wherein "said processor is configured to eliminate a plurality of inconsistencies" at Col. 22 lines 30-67.

As per claim 14, Bauer teaches the system as claimed in claim 12, wherein "said processor is configured to allocate each conflict type a decision set which is used to indicate possible decisions which can be used to eliminate an inconsistency created by a plurality of operations of said respective conflict type" at Col. 21 lines 30-65.

As per claim 15, Bauer teaches the system as claimed in claim 12, wherein "said processor is configured to operate a database collection that contains a plurality of copy databases of said database" at Col. 6 lines 5-25.

As per claim 17, Bauer teaches the system as claimed in claim 12, wherein "said processor 1s is configured to a certain a conflict, an anomaly or a pseudo-anomaly when an inconsistency is ascertained" at Col. 22 lines 30-67.

As per claim 19, Bauer teaches the system as claimed in claim 13, wherein "said processor is configured to examine, after a prescribable number of eliminated

inconsistencies, said database collection for further inconsistencies and their

dependencies, anomalies and pseudo-anomalies" at Col. 24 lines 10-67.

As per claim 20, Bauer teaches the system as claimed in claim 12, wherein

"said processor is configured to operate on said database collection that contains an

object-oriented database" at Col. 27 lines 45-65.

As per claim 21, Bauer teaches the arrangement as claimed in claim 12,

wherein "said processor is configured to operate in a context of object-oriented software

development" at Col. 27 lines 45-65.

As per claim 22, Bauer teaches the system as claimed in claim 12, wherein

"said processor is configured to operate in a context of creating a structured electronic

document" at Col. 27 lines 45-65.

As per claim 23, Bauer teaches a set of a plurality of system for eliminating at

least one inconsistency in a database collection containing a database and at least one

copy database of said database comprising:

- "a plurality of processors, wherein each system has at least one processor which

  is configured to: allocate at least some operations which create an inconsistency

  to defined conflict types" at Col. 6 line 60 to Col. 7 line 3;

- "allocate to each conflict type a decision set which is used to indicate possible

  decisions which can be used to eliminate an inconsistency created by at least

  one operation of said respective conflict type" at Col. 21, Table II;

- "eliminate said inconsistency using said decision set" at Col. 22 lines 30-67;

- "said systems being configured to be coupled to one another to determined a plurality of inconsistencies and their dependencies on one another before eliminating said inconsistency" at Col. 21 lines 30-60;

- "modifying, while eliminating the inconsistency, said decision set for at least one conflict type based on dependencies of said inconsistencies" at Col 22 lines 45-50".

As per claim 24, Bauer teaches a device comprising:

- "an identification unit to identify conflict between a database and a database copy" at Col. 17 lines 60-65;

- "a dependency unit to determine interdependencies between conflicts" at Col. 25 lines 40-55;

- "a solution procedure unit to identify, for each conflict, the type of operation which created the conflict and a solution procedure for the type of operation, to thereby form a set of solution procedures for the respective conflicts" at Col. 21 lines 30-65 and Col. 22 lines 30-50;

- "a modification unit to modify the set of solution procedures based on the interdependencies between the conflicts, to thereby produce a modified set of solution procedures" at Col. 22 lines 45-50;

- "an elimination unit to eliminate the conflicts using the modified set of solution procedure" at Col. 22 lines 30-65.

Response to Arguments

4.   Applicant's arguments filed October 22, 2003 have been fully considered but they

are not persuasive. The examiner respectfully traverses applicant's arguments.

Applicant argued that Bauer neither teaches "decision sets" nor "allocation of

decision to conflict type". On the contrary, Bauer teaches that conflict types are defined

and a decision set is associated with each conflict type at Col. 22 recited below:

> For insert conflicts and delete conflicts, the catalog
> instructs the server to select either the client's operation or
> 40   the server's operation, and to reject the other operation. For
> an insert conflict, either the client's complete row or the
> server's complete row is inserted. For a delete conflict, the
> row is either deleted, or the complete set of updates is
> applied.

Bauer defines three types of conflict: "insert conflict", "delete conflict", and

"update conflict", wherein each type of conflict is associated with a decision set which is

used to indicate possible action which can be used to eliminate inconsistency. For

example, possible action for "insert conflict" is selected from the set <client's operation |

Server's operation>, possible action for "delete conflict" is selected from the set <the

row is deleted | the complete set of updates is applied>.

Applicant argued that Bauer does not teach "while eliminating the inconsistency,

the decision set for at least one conflict type is modified based on dependencies of

these inconsistencies. On the contrary, Bauer teaches the steps for eliminating

inconsistency for "update conflict" in which the decision set is modified based on

dependencies of the inconsistencies (i.e., the dependencies between columns C1, C2,

and C2 of the database table) at Col. 22 as follows:

45   For update conflicts, the catalog instructs the server to
      select either the client's value or the server's value for each
      individual conflicting data field. For example, the catalog
      can state that for columns C1 and C3, the server value
      prevails, but for column C2 the client value prevails.

50   The server uses the conflict resolution settings in the
      catalog to determine whether to apply the client's changes to
      the server table. For cases where the client operation or
      updated data field value prevails, the server applies the client
      operation or update. For cases where the server operation or
      updated data field prevails, the server does not apply the
55   client operation or update. In these cases, the client table will
      not agree with the server table until the client is next
      refreshed.

In light of the foregoing arguments, the 35 U.S.C 102 rejection is hereby

sustained.

Conclusion

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Khanh B. Pham whose telephone number is (703) 308-

7299. The examiner can normally be reached on Monday through Friday 7:30am to

4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John E Breene can be reached on (703) 305-9790. The fax phone number

for the organization where this application or proceeding is assigned is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703)746-

7240.

Khanh B. Pham
Examiner
Art Unit 2177

KBP
January 8, 2004

JEAN R. HOMERE
PRIMARY EXAMINER